

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Service, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington, DC 20503.

PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE (DD-MM-YYYY) 11-03-2011		2. REPORT TYPE Master of Military Studies Research Paper		3. DATES COVERED (From - To) September 2010 - April 2011	
4. TITLE AND SUBTITLE Army-Marine Corps Logistics Integration: Is Current Doctrine, Training and Education Sufficient to Develop Joint Logisticians?				5a. CONTRACT NUMBER N/A	
				5b. GRANT NUMBER N/A	
				5c. PROGRAM ELEMENT NUMBER N/A	
6. AUTHOR(S) Karin R. Fitzgerald, USMC, Major				5d. PROJECT NUMBER N/A	
				5e. TASK NUMBER N/A	
				5f. WORK UNIT NUMBER N/A	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) USMC Command and Staff College Marine Corps University 2076 South Street Quantico, VA 22134-5068				8. PERFORMING ORGANIZATION REPORT NUMBER N/A	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A				10. SPONSOR/MONITOR'S ACRONYM(S) N/A	
				11. SPONSORING/MONITORING AGENCY REPORT NUMBER N/A	
12. DISTRIBUTION AVAILABILITY STATEMENT Unlimited					
13. SUPPLEMENTARY NOTES N/A					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON Marine Corps University / Command and Staff College
a. REPORT Unclass	b. ABSTRACT Unclass	c. THIS PAGE Unclass			19b. TELEPHONE NUMBER (Include area code) (703) 784-3330 (Admin Office)

1. REPORT DATE. Full publication date, including day, month, if available. Must cite at least the year and be Year 2000 compliant, e.g., 30-06-1998; xx-08-1998; xx-xx-1998.

2. REPORT TYPE. State the type of report, such as final, technical, interim, memorandum, master's thesis, progress, quarterly, research, special, group study, etc.

3. DATES COVERED. Indicate the time during which the work was performed and the report was written, e.g., Jun 1997 - Jun 1998; 1-10 Jun 1998; May - Nov 1998; Nov 1998.

4. TITLE. Enter title and subtitle with volume number and part number, if applicable. On classified documents, enter the title classification in parentheses.

5a. CONTRACT NUMBER. Enter all contract numbers as they appear in the report, e.g. F33615-86-C-5169.

5b. GRANT NUMBER. Enter all grant numbers as they appear in the report, e.g. 1F665702D1257.

5c. PROGRAM ELEMENT NUMBER. Enter all program element numbers as they appear in the report, e.g. AFOSR-82-1234.

5d. PROJECT NUMBER. Enter all project numbers as they appear in the report, e.g. 1F665702D1257; ILIR.

5e. TASK NUMBER. Enter all task numbers as they appear in the report, e.g. 05; RF0330201; T4112.

5f. WORK UNIT NUMBER. Enter all work unit numbers as they appear in the report, e.g. 001; AFAPL30480105.

6. AUTHOR(S). Enter name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. The form of entry is the last name, first name, middle initial, and additional qualifiers separated by commas, e.g. Smith, Richard, Jr.

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES). Self-explanatory.

8. PERFORMING ORGANIZATION REPORT NUMBER. Enter all unique alphanumeric report numbers assigned by the performing organization, e.g. BRL-1234; AFWL-TR-85-4017-Vol-21-PT-2.

9. SPONSORING/MONITORS AGENCY NAME(S) AND ADDRESS(ES). Enter the name and address of the organization(s) financially responsible for and monitoring the work.

10. SPONSOR/MONITOR'S ACRONYM(S). Enter, if available, e.g. BRL, ARDEC, NADC.

11. SPONSOR/MONITOR'S REPORT NUMBER(S). Enter report number as assigned by the sponsoring/ monitoring agency, if available, e.g. BRL-TR-829; -215.

12. DISTRIBUTION/AVAILABILITY STATEMENT. Use agency-mandated availability statements to indicate the public availability or distribution limitations of the report. If additional limitations/restrictions or special markings are indicated, follow agency authorization procedures, e.g. RD/FRD, PROPIN, ITAR, etc. Include copyright information.

13. SUPPLEMENTARY NOTES. Enter information not included elsewhere such as: prepared in cooperation with; translation of; report supersedes; old edition number, etc.

14. ABSTRACT. A brief (approximately 200 words) factual summary of the most significant information.

15. SUBJECT TERMS. Key words or phrases identifying major concepts in the report.

16. SECURITY CLASSIFICATION. Enter security classification in accordance with security classification regulations, e.g. U, C, S, etc. If this form contains classified information, stamp classification level on the top and bottom of this page.

17. LIMITATION OF ABSTRACT. This block must be completed to assign a distribution limitation to the abstract. Enter UU (Unclassified Unlimited) or SAR (Same as Report). An entry in this block is necessary if the abstract is to be limited.

United States Marine Corps
Command and Staff College
Marine Corps University
2076 South Street
Marine Corps Combat Development Command
Quantico, Virginia 22134-5068

MASTER OF MILITARY STUDIES

TITLE

Army-Marine Corps Logistics Integration: Is Current Doctrine, Training and Education
Sufficient to Develop Joint Logisticians?

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

AUTHOR

Karin R. Fitzgerald, Major, USMC

AY 10-11

Mentor and Oral Defense Committee Member: Edward Erickson, PhD

Approved: 

Date: 11 MARCH 2011

Oral Defense Committee Member: Pauletta Otis, PhD

Approved: 

Date: 11 March 2011

DISCLAIMER

THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE COPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

QUOTATION FROM, ABSTRACTION FROM, OR REPRODUCTION OF ALL OR ANY PART OF THIS DOCUMENT IS PERMITTED PROVIDED PROPER ACKNOWLEDGEMENT IS MADE.

Table of Contents

Disclaimer.....	i
Table of Content.....	ii
List of Acronyms.....	iii
Executive Summary.....	v
Introduction.....	1
Logistics Lessons Learned.....	2
Marine Corps Logistics Doctrine.....	3
Army Logistics Doctrine.....	6
Joint Logistics Doctrine.....	7
Training versus Education.....	8
MAGTF Logistics Training and Education Center (MLTEC).....	9
Marine Corps Logistics Training.....	10
Marine Corps Logistics Education.....	11
Naval Logistics Integration Training and Education.....	12
Army Logistics Training and Education.....	13
Joint Logistics Education.....	14
Fixing the Doctrine Gap.....	15
The Joint Logistics Training and Education Gap.....	16
Improving Training and Education in Joint Logistics.....	18
Logistics Training and Education Roadmaps.....	19
Conclusion.....	21
Bibliography.....	26

List of Acronyms

ALOC	Advanced Logistics Officers Course
ALSA	Air Sea Land Application Center
ALU	Army Logistics University
AMLOC	Advanced MAGTF Logistics Operations Course
ARG	Amphibious Readiness Group
CLB	Combat Logistics Battalion (USMC)
CLCCC	Combined Logistics Captain's Career Course (Army)
C2	Command and Control
COCOM	Combatant Command
CONUS	Continental United States
CSG	Corps Support Group (Army)
CSS	Combat Service Support
CSSB	Combat Sustainment Support Battalion (Army)
CULS	Common User Logistics Support
CULT	Common User Land Transportation
DC I&L	Deputy Commandant Installations and Logistics (USMC)
DOTMLPF	Doctrine, Organization, Training, Materiel, Logistics, Personnel, Facilities
EA	Executive Agent
EPW	Enemy Prisoner of War
EWS	Expeditionary Warfare School
FM	Field Manual
FOB	Forward Operating Base
FSB	Forward Support Battalion (Army)
GAO	Government Accountability Office
GS	General Support
IMLOC	Intermediate MAGTF Logistics Operations Course
ISSA	Interservice Support Agreements
JFC	Joint Force Commander
JKO	Joint Knowledge Online
JLC	Joint Logistics Course
JLE	Joint Logistics Enterprise
JLETES	Joint Logistics Education, Training, and Exercise Study
JLETT-WG	Joint Logistics Education, Training and Experimentation Transformation Working Group
JLWP	Joint Logistics White Paper
JP	Joint Publication
LCE	Logistics Combat Element
LOC	Lines of Communications
LOCC	Logistics Operations Chief Course
LOGCAP	Logistics Civilian Augmentation Program
LOGTECH	Logistics Technology course
LOGTECOE	Logistics Training and Education Center of Excellence
LOS	Logistics Operations School
MAGTF	Marine Air Ground Task Force
MARFOR	Marine Forces
MEU	Marine Expeditionary Unit
MLTEC	MAGTF Logistics Training and Education Center

MCCLL	Marine Corps Center for Lessons Learned
MCCSSS	Marine Corps Combat Service Support Schools
MCDP	Marine Corps Doctrinal Publication
MCIP	Marine Corps Interim Publication
MCLEP	Marine Corps Logistics Education Program
MCLOG	Marine Corps Logistics Operations Group
MCRP	Marine Corps Reference Publication
MCWP	Marine Corps Warfighting Publication
MEF	Marine Expeditionary Force
MLG	Marine Logistics Group
MNF-W	Multinational Forces West
MOS	Military Occupational Specialty
MWR	Morale, Welfare, and Recreation
NCO	Non-Commissioned Officer
NLI	Naval Logistics Integration
OFEC	Occupational Field Expansion Course
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OJT	On the Job Training
PME	Professional Military Education
RCT	Regimental Combat Team
SMU	SASSY Management Unit (USMC Intermediate Level Supply)
SNCO	Staff Non-Commissioned Officer
SOML	School of MAGTF Logistics
SSA	Supply Support Activity (Army)
T&E	Training and Education
TECOM	Training and Education Command
TLOC	Tactical Logistics Officers Course
TRNGCMD	Training Command (USMC)
TTPs	Tactics Techniques and Procedures
T&R	Training and Readiness
USMC	United States Marine Corps

Executive Summary

Title: ARMY-MARINE CORPS LOGISTICS INTEGRATION: IS CURRENT DOCTRINE, TRAINING AND EDUCATION SUFFICIENT TO DEVELOP JOINT LOGISTICIANS?

Author: Major Karin R. Fitzgerald, United States Marine Corps

Thesis: A significant gap in the doctrine, publications, training and educational opportunities for Marine Corps logisticians impedes their ability to operate effectively in the joint logistics environment. Service and joint publications must be created to provide the tactics, techniques, and procedures for joint logistics, improved training and education opportunities to provide joint logistics knowledge and concepts, as well as an institutional focus and support for the professional development of joint logisticians.

Discussion: It is impossible to conduct operational or theater level logistics without integrating with army processes. One of the most difficult tenants of joint logistics from JP 4-0 Logistics, is the ability to achieve unity of effort amongst multiple services with internal responsibilities for logistics, service specific logistics systems, as well as an interdependence for resources. Marine logistics doctrine covers the concept of joint logistics with regard to Marine Corps operations; however it fails to provide it the attention necessary in the current interdependent joint logistics environment. Marine Corps, Army, and Joint doctrine support the integrated, joint, interdependent concept for logistics support, but more proscriptive processes and procedures are currently absent. The techniques, tactics, and procedures developed by logistics units during the last seven years of operating in the joint logistics environment need to be codified into a workable reference and then into additional training and education. There are numerous logistics training and educational opportunities available, but without an institutionalized focus on developing capable joint logistics personnel, the right training and education is not provided to the right people at the right time. Not only is there a gap between the skills required of a Marine Logistician and available joint training and education, but the gap is exacerbated by a lack of focus and prioritization by the institution.

Conclusion: Services must create service and joint publications to provide the tactics, techniques, and procedures for joint logistics, improve training and education opportunities to provide joint logistics knowledge and concepts, as well as an institutional focus and support for the professional development of joint logisticians. The combination of doctrine, reference manuals, and TTPs should provide the framework to develop the training and education necessary to create effective joint logisticians. Existing Marine Corps courses should inculcate joint logistics training and education as well as developing new courses to a broader audience. Most importantly, the institution should place an emphasis on the professional development of not just a Marine logistician, but a joint logistician.

Introduction

“The emerging security environment generates hard requirements for lighter and leaner forces, capable of being effectively sustained over a greater distance. Our efforts to modernize logistics must focus on a markedly improved ability to sense what is needed and respond accordingly. To that end, an integrated and secure logistics operational architecture that identifies the people, processes, and capabilities required to support deployed MAGTFs is fundamental to logistics modernization.”

-Marine Corps Vision & Strategy 2025

The Marine Corps Vision and Strategy 2025 depicts an operating environment characterized by small independent units operating across the spectrum of conflict. This scenario also describes previous Marine Corps operations in Iraq and current operations in Afghanistan. This environment requires Marine Corps logisticians capable of conducting distributed and sustained logistics in a joint and interagency environment. The Army and Marine Corps are logistically tied together as elements of the Land Component, but also at sea with the development of sea-based over the horizon logistics. In a presentation to the Marine Corps Advanced Logistics Officer Course, LtCol Kris O'Brien from the J4, discussed the progression of joint logistics from deconfliction, to coordination, to jointness, to interdependency, and how our current state of interdependency requires us to understand joint logistics.¹ A true joint logistician must be developed through training, education, experience, and must be supported by service and joint publications that define relationships, responsibilities, and procedures. A significant gap in the doctrine, publications, training, and educational opportunities for Marine Corps logisticians impedes their ability to operate effectively in the joint logistics environment. Services must create service and joint publications to provide the tactics, techniques, and procedures for joint logistics, improve training and education opportunities to provide joint logistics knowledge and concepts, as well as an institutional focus and support for the professional development of joint logisticians.

Logistics Lessons Learned

“The MEF MLG SMU was used extensively in support of the BCT. This MEF GS supply activity maintained 20,000 lines of multiclass supplies. Although the SMU and the FSB were located on the same FOB, their respective service provided management information systems did not communicate with each other...For example, if a unit had a class IX requisition and the part was sitting at another tactical SSA in Iraq, the part would still be shipped from CONUS...In order to get a part from another tactical SSA in Iraq, the maintenance officer would have to personally contact the SSA chief who stocked the part and arrange a gentlemen’s agreement.”²

-Maj Mike D. Pike, PAANG, Operations Officer 228th FSB (OIF 05-07)

Examples of interservice support are everywhere in OIF and OEF lessons learned. In

Iraq in the summer of 2009, the 507th Corps Support Group supported Multi-national Force West (MNF-W) which included both Army and Marine units.³ The 507th CSG and 2nd Marine Logistics Group Forward (2D MLG FWD) were responsible for providing both direct and indirect support to MNF-W units.⁴ Marine Logistics Battalion 4 (CLB-4) worked with the 787th CSSB to provide support to the Marine Regimental Combat teams operating in their area, including direct support to RCT 1 and Camp Hit.⁵

Operations in Afghanistan and previously in Iraq have stretched the logistical capabilities of all services. Logisticians on the ground have adapted to larger distances and faster moving combat units, while combating a dysfunctional intratheater joint logistics system. One of the greatest problems with joint logistics is associated with Command and Control (C2).⁶ Service specific logistics systems that cannot communicate and the bureaucracy resulting from separate logistics structures, organizations, and systems inhibit command and control. Currently, “each service component commander is responsible for providing his own logistics structure to support his forces.” The separate service logistics structures are not interoperable. Informal deals and personality facilitate logistics transactions when there is not a definitive process. Without procedures that enhance interservice support and intertheater distribution, joint logistics will continue to be unwieldy, unresponsive, and inefficient. All services have a vested interest in how

the Army conducts logistics in a joint environment because the Army has the structure, equipment, and knowledge to do ground logistics from the tactical to theater level. “The Army logistics community must establish innovative training and doctrine that incorporates lessons learned while providing support in joint environments”⁷ Logistics integration with the Army is the biggest step to integrating in a joint logistics environment.

Marine Corps Logistics Doctrine

Most Marine Corps logistics doctrine and publications devote a paragraph or two to joint logistics and integration with varying specificity. Marine Corps doctrine consists of Marine Corps Doctrinal Publications (MCDPs) supported by Marine Corps Warfighting Publications (MCWPs), Marine Corps Reference Publications (MCRPs), and Marine Corps Interim Publications (MCIPs).⁸ MCDPs are capstone publications of fundamental and enduring guidance for warfighting.⁹ MCWPs, MCRPs, and MCIPs support MCDPs and increase in detail and specificity accordingly. MCIPs “rapidly disseminate new TTPs, based on finding from lessons learned, training and experimentation.”¹⁰ MCIP content will be validated and added to MCWPs or MCRPs after two years or expire. These doctrinal publications provide concepts and guidance for approaching Marine Corps operations. Marine Corps publications such as orders, instructions, directives, or technical manuals provide even more proscriptive methods.

The senior doctrinal logistics publication for the Marine Corps is MCDP 4 *Logistics*. It provides logistics theory and considerations for effective logistics with regard to maneuver warfare focusing only on Marine logistics.¹¹ This publication provides the Marine logistician the theory of logistics within the context of the Marine Corps warfighting philosophy. In this publication, Marine logistics is discussed with regard to supporting the principles of maneuver by being flexible, adaptable, and responsive. MCDP 1-0 closely follows MCDP 4. MCDP 1-0

Marine Corps Operations is intended to provide a transition from the Marine Corps warfighting philosophy to Marine Corps operations. MCDP 1-0 has a chapter on logistics that describes the three levels of logistics, the six functions, C2, and logistics support for operational, strategic, MAGTF and joint logistics.¹² This publication devotes a mere two pages to joint and multinational logistics operations and mainly provides recommendations for planning, liaison officers, and support agreements in general terms without naming the Army as a logistical support provider beyond MAGTF organic capabilities.

According to doctrine, the Marine Corps operates as a Marine Air Ground Task Force (MAGTF) with organic logistics capabilities. MAGTFs can vary in size, but most are self-sustaining for 30-60 days while external support and resupply lines are prepared.¹³ Joint logistics is the external support and resupply channels that support the MAGTF beyond its organic logistics capabilities. The Marine Corps Warfighting Publication 4-11 (MCWP 4-11) *Tactical Logistics* outlines the responsibilities of the different command level Marine logistics staffs for logistics integration and coordination with other services. According to the MCWP 4-11,

When conducting sustained operations ashore, Marine forces are usually part of a joint or combined force, and the COMMARFOR is subordinate to the JFC. The COMMARFOR must be capable of coordinating combat, combat support, and CSS activity with adjacent units from other Services and allied nations as well as exercising operational control over assigned forces.¹⁴

Additionally, in a Joint Task Force, the Marine Force (MARFOR) is responsible for coordinating logistics support with joint forces, other services, and nation agencies.¹⁵ The Marine Air Ground Task Force (MAGTF) has the responsibility, “of integrating organic logistics operations with logistics support from external commands or agencies.”¹⁶ Both MCWPs speak to inter-service support agreements, common user logistics, and lead service/ executive agents as methods for logistics support beyond organic service capabilities. Neither document discusses which Marine

logistics entity establishes, supervises, or promulgates these logistics arrangements. MCWP 4-12 *Operational-Level Logistics* is a detailed guide directed towards higher-level staff action required to plan and conduct logistics at the operational level. This publication still provides a good understanding of the operational level planning considerations and theater-level logistics organizations to benefit even a junior logistician.¹⁷ MCWP 4-12 provides a slightly more in depth description of logistics organizations for all services, joint logistics responsibilities, and C2 relationships, but falls short any specificity concerning procedures to establish joint or integrated logistics agreements or processes.

Marine Corps Reference Publication (MCWP) 3-36 (also FM 3-31.1) *Army and Marine Corps Integration in Joint Operations* includes a chapter on administration and logistics. This publication outlines the authority and responsibilities for supporting joint forces, describes notional logistics organizations for the Army and the Marine Corps, defines the six functions of logistics (supply, maintenance, transportation, general engineering, health services, and other services), and discusses integrated logistics operations.¹⁸ The portion on integrated logistics operations provides useful C2 diagrams and describes the flow of support by logistics function, but concludes emerging joint doctrine and joint TTPs would provide the specific tactics, techniques and procedures (TTPs). While the most promising (if out dated) publication concerning Marine Corps Logistics integration, this publication was cancelled and not replaced.

Marine logistics doctrine covers the concept of joint logistics with regard to Marine Corps operations, however it fails to provide it the attention necessary in our interdependent joint logistics environment. While the over arching concept of joint logistics and integration is discussed, subordinate publications with more proscriptive processes and procedures are currently absent. Additionally, none of the Marine Corps logistics doctrine or publications

reviewed reflected the significant change in the organization and support relationships of the Marine Logistics Group (MLG) that occurred in 2005, changes in Army logistics support organizations, or lessons learned from the last eight years of combat operations in Iraq and Afghanistan.¹⁹

Army Logistics Doctrine

“Joint interdependence is the purposeful reliance by one Service’s forces on another Service’s capabilities to maximize the complementary and reinforcing effects of both. Army forces operate as part of an interdependent joint force.”²⁰

-FM 3-0 Operations

Army logistics provides tactical, operational, and even some strategic level sustainment to forces. The army is responsible for theater movement, ground sustainment and distribution, therefore understanding joint logistics requires an understanding of army logistics. Army logistics doctrine is primarily guided by FM 3-0 *Operations* and FM 4-0 *Sustainment*. Both of these publications speak to army logistics operations in a joint environment, the concept of lead service, Common User Logistics Support (CULS), C2 relationships, and Interservice Support Agreements (ISSA).²¹ The army provides interservice support in addition to acting as the Lead Service for Common-User Logistics. Interservice support describes action by a military service to provide logistics or administrative support to another service. An example of army interservice support would be the establishment of forward operating base life support logistics through the army’s Logistics Civilian Augmentation Program (LOGCAP). LOGCAP is able to provide food service, water production and storage, ice production, retail fuel, power generation, billeting, waste management, laundry, and Morale Welfare Recreation (MWR).²²

The lead service for common-user logistics includes the responsibility for execution of all common-user items or service support for a specific operation or Combatant Command. As a DoD Executive Agent (EA) the army must, “provide defined levels of support for both

operational and administrative missions involving two or more organizations where efficiency or effectiveness gains must be achieved.”²³ The Army is currently the EA for programs including the Defense Mortuary Affairs program, Military Postal Service and DoD Detainee program. In the joint operating environment, the army has responsibility for the preponderance of logistics beyond organic Marine logistics capabilities. Therefore, joint logistics for the Marine Corps is primarily concerned with Marine-Army ground logistics integration.

Army logistics is currently undergoing a transformation to become a more streamlined, modular, joint capable force.²⁴ As the face of warfare has changed, logistics also changed to support the warfighter on the ever changing and more complex battlefield.²⁵ As the Army transforms its logistics forces and processes, the Marine Corps will need to adjust doctrine to reflect the new organization and structure changes, C2 relationships, and capabilities.

Joint Logistics Doctrine

“Joint Logistics is an essential component of joint operations because the Services, by themselves, seldom have sufficient capability to independently support the joint force.” JP 4-0²⁶

Joint logistics doctrine is located in Joint Publication (JP) 4.0, *Doctrine for Logistic Support of Joint Operations*. The six functions of joint logistics doctrine are supply, maintenance, health service support, transportation services, and general engineering.²⁷ The Marine Corps uses the same six functions, but the army does not. JP 4-0 designates the roles and responsibilities of the services for joint logistics. Joint logistics requires the coordination, synchronization, and distribution of logistic resources from multiple services or agencies to support the joint force.²⁸ According to JP 4-0, the army supports other services with theater lines of communication (LOCs), common user logistics (CUL), common user land transportation (CULT), petroleum storage/distribution, theater collection point and evacuation support, port and ocean terminal management, medical logistics, helicopter support, logistics support to Enemy

Prisoners of War (EPWs), airfield repair, joint logistics over the shore (JLOTS), and port engineering operations.²⁹

The above responsibilities comprise the majority of joint ground logistics transactions. It is impossible to conduct operational or theater level logistics without integrating with army processes. One of the most difficult tenants of joint logistics from JP 4-0, is the ability to achieve unity of effort amongst multiple services with internal responsibilities for logistics, service specific logistics systems, as well as an interdependence for resources. The JP 4-0 states “to achieve unity of effort, joint logisticians must develop a clear understanding of how joint and multinational logistic processes work; know the roles and responsibilities of the providers executing tasks in those processes; build agreement around common measures of performance (process outcomes); and ensure appropriate members of the JLE have visibility into the processes.”³⁰ None of these requirements are currently developed further in joint doctrine or other publications. Command relationships are designated as supported or supporting. Meeting the requirements of the supported commander requires effective delivery of joint logistics through coordinating and integrating service, agency, and other capabilities. This level of integration requires logisticians able to, “effectively and efficiently plan, execute, control, and assess joint logistic operations.”³¹ Joint doctrine assumes a highly proficient and knowledgeable logistician. Is the Marine Corps creating logisticians with the requisite skills and abilities to execute joint logistics doctrine? The next section examines the training and education opportunities provided to Marine Corps Logisticians.

Training versus Education

“What is the difference between training and education? It's the difference between *know how* and *know why*.”³²

-Robert H. Essenhigh

Doctrine dictates broad concepts of operations, organizational structures, and support relationships; however, training and education of personnel is how doctrine becomes executable. Training and education are often lumped together or incorrectly used interchangeably. Personnel are trained in specific skill sets and educated in concepts for later application in planning and decision-making. A 2008 study concerning Marine Corps logistics conducted by Marine Corps Installations & Logistics (I&L) office discovered the “logistics training and educational continuum’s effectiveness is being questioned by senior leaders.”³³ Marine Corps training and education is the responsibility of Training and Education Command (TECOM). TECOM is split in to Training Command (TRNGCMD) and Education Command. The Marine Corps system for education is less rigid, concentrating on understanding concepts determined by the community to be of value. The Marine Corps has a more rigid system for training based on the individual MOS Training and Readiness (T&R) Manuals that outline the task required at each level and the steps to accomplish those tasks. The T&R therefore determines what Marines are trained to do.

MAGTF Logistics Training and Education Center (MLTEC)

In 2008, Marine Corps Training and Education Command (TECOM) conducted an analysis of the logistics training and education continuum to determine any gaps where required skills where not covered.³⁴ The most significant gaps in the Logistics Combat Element (LCE) training and education were Operational logistics decision making, planning LCE C2, establishing Combat Operations Center operations, proficiency in unit training management, joint theater logistics integration, MAGTF and Command Element integration, understanding MAGTF sustainment, and collective LCE training and evaluation.³⁵ The two gaps relevant to this paper are joint theater logistics integration and understanding MAGTF sustainment. The

result of the TECOM logistics training and education gap analysis was the TECOM directive to establish the MAGTF Logistics Training and Education Center (MLTEC), Marine Corps Logistics Operations Group (MCLOG), and three follow-on logistics training courses.³⁶ MLTEC will be comprised of the current Marine Corps Combat Service Support Schools (MCCSSS) with broader authority and responsibilities for the entire logistics training and education continuum (similar to those of the previous Logistics Training and Education Center of Excellence LOGTECOE)).

Marine Corps Logistics Training

“Marine Corps Combat Service Support Schools develops, conducts and evaluates formal training for entry, intermediate and advanced level officer, enlisted and civilian students in Personnel Administration, Ground Supply Support and Distribution, Financial Management and Logistics Operations, as well as Marine Corps Water Survival training; and sustains the professional transformation of Marines in order to prepare graduates for service in the operating forces and supporting establishment..”³⁷

-MCCSSS Mission Statement

The Marine Corps Combat Service Support Schools (MCCSSS), Camp Johnson North Carolina conducts the majority of logistics training. MCCSSS provides initial and follow-on training for logistics, supply, personnel administration, and financial management as outlined in the Training and Readiness (T&R) Manual. Logistics Operations School provides initial and follow on training for numerous MOSs from maintainers to embarkers. Supply is a function of logistics. Supply School provides initial training for supply administration clerks, warehousemen, and officers, but only follow-on training for ground supply NCOs and SNCOs. Supply officers and enlisted personnel may fill logistics billets because of a personnel shortage. This is especially the case with Supply officers who are considered logisticians even though their training and typical experience are insufficient. According to the current T&R manual for Supply and Logistics Officer MOSs, all training beyond initial MOS training is considered on-the-job-

training (OJT).³⁸ Due to operational commitments and lack of priority to pre-deployment training, OJT MOS training has been woefully insufficient. Currently none of the courses provided by MCCSSS include training in joint logistics, other than a brief hour Supply School provides its officers, NCOs, and SNCO courses on Naval Logistics Integration (NLI). NLI focuses on procedures for Marine logisticians to leverage the Navy's afloat logistics capabilities and the procedures for Navy units (Riverine units, Beach Masters, EOD, etc...) to receive logistics support from Marine Corps units while ashore. Comprehensive instruction in NLI is provided as part of the pre-deployment work-up for Marine Expeditionary Units.

The Training and Education Command (TECOM) logistics training and education gap analysis should produce significant changes in the new Supply and Logistics T&R manuals to include follow-on training for officers at the formal school instead of OJT. TECOM has directed MCCSSS to create three new courses, the Intermediate MAGTF Logistics Operations Course (IMLOC), the Advanced MAGTF Logistics Operations Course (AMLOC), and the Logistics Operations Chief Course (LOCC). The curriculum for IMLOC is still in the process of development for the March 2011 pilot course.³⁹ IMLOC targets company grade officers at the tactical level serving as Operations Officers or S-4 Staff officers and "does not go into depth about the joint side of logistics."⁴⁰ The curriculum for AMLOC and LOCC has not been yet been determined.

Marine Corps Logistics Education

Until recently, logistics education fell under the School of MAGTF Logistics (SOML) as part of the Marine Corps University. SOML courses included the Tactical Logistics Officer Course (TLOC), the Advance Logistics Officer Course (ALOC), and Marine Corps Logistics Education Course (MCLEP). All of these courses provided logistics education concerning the

tactical, operational and strategic levels of war without any MOS specific training concerning actual processes other than the Marine Corps Planning Process.⁴¹ SOML also interfaced on the Marine Corps' behalf to fill seats in external courses like the Joint Logistics Course, Multinational Logistics Course, and Logistics Technology (LOGTECH) course. TLOC and ALOC were cancelled as a result of the TECOM logistics training and education gap analysis, and SOML has been subsumed under MCCSSS (MLTEC). TLOC and ALOC are to be replaced by IMLOC and AMLOC respectively. Logistics Operations School is still developing these courses, so the impact of replacing TLOC and ALOC remains inconclusive.

Another opportunity for logistics officers to receive follow-on logistics education is while attending resident Professional Military Education (PME) at Expeditionary Warfare School. For two weeks in the fall and another two weeks in the spring, all MOSs are separated to focus on doctrine, planning, and leadership specific to their field during the Occupational Field expansion Course (OFEC). The Combat Service Support (CSS) MOSs attend the same OFEC even though the group ranges from Public Affairs Officers and Comptrollers to Military Police and Engineers. MCCSSS (MLTEC) has taken over the CSS OFEC curriculum and it will now mirror the IMLOC curriculum and therefore not include in depth education in joint logistics.⁴² Regardless, on average only 15 logisticians are selected to attend resident EWS a year, so even if the training changes to include joint logistics it does not reach a wide audience.⁴³

Naval Logistics Integration Training and Education

The Naval Logistics Integration (NLI) program is not considered joint logistics because the Marine Corps is part of the naval service. However, NLI is very applicable to how two disparate logistics entities can integrate their processes. NLI started as an effort to improve Marine Expeditionary Unit logistics afloat by leveraging Navy capabilities. Now, NLI

coordinates development and maintenance of policies and standards necessary to support interoperability and integration of naval logistics.⁴⁴ Marine and Navy personnel developed and agreed to manual that provides standard support relationships and specific procedures as well as contact information if logisticians need additional help. This manual is called the NLI Playbook. The playbook and the additional training provided to the navy Amphibious Readiness Groups (ARG) and Marine Expeditionary Units (MEU) provides the necessary link between doctrine and execution. Additionally, the NLI 2011-2015 Strategic Plan has identified the broadening of logistics training and education opportunities as vital to enhancing naval expeditionary logistics.⁴⁵ NLI is successful because it provides a singular focus in doctrine, orders, education and training for naval logistics supported by the top logisticians in each service (OPNAV N4 and DC I&L). NLI provides the user training in the TTPs and a source (NLI Playbook) to facilitate execution.

Army Logistics Training and Education

“Our Mission is to enhance the readiness and sustainability of U.S. Forces through training, education, consulting and research in Logistics, Acquisition and Operations Research Systems Analysis.”⁴⁶

-Army Logistics University Mission Statement

The Army has invested a considerable amount of time, money and energy in training and educating their logistics force. The Army Logistics University (ALU) provides over 200 courses in professional military education and key functional training to sustainment leaders through three colleges, the College of Professional and Continuing Education, the Logistics Leader College, and the Technical Logistics College, and a consolidated Logistics Noncommissioned Officer Academy.⁴⁷ ALU provides numerous courses for students of various military grades and logistics specialties to include the Joint Logistics Course (JLC). These courses do not provide detailed instruction on Army integration or interoperability with the Marine Corps, but they

discuss operational level Army lead service, interservice, and CUL responsibilities to non-Army units. While some specific Marine MOSs (Food service, Traffic Management Officers, ordnance, etc...) receive army training, most logistics personnel do not unless selected for JLC.

The army's company grade logisticians attend the Combined Logistics Captain's Career Course (CLCCC) at ALU to develop the skills necessary to perform as leaders and staff officers in the logistics field.⁴⁸ CLCCC concentrates on unit training management, command and control, and decision making for future company commanders and multifunctional staff officers. The course provides excellent networking opportunities for those Marine Officers that attend, but no hard training in the process of Army and Marine Corps Logistics integration. On average only eighteen Marine logistics officers attend CLCCC a year.⁴⁹

Joint Logistics Education

"Our people are our greatest asset. We have an obligation to provide training, education, and career development opportunities that sharpen and challenge each member."⁵⁰

-Lt Gen Kathleen M. Gainey, J4 Director for Logistics

There is a plethora of joint logistics education available online provided by Defense Acquisition University and Joint Knowledge Online (JKO). These courses include joint, multinational, and NATO logistics courses.⁵¹ The Joint Logistics, Education, Training and Exercise Study (JLETES) determined the majority of action officers filling COCOM joint logistics billets felt themselves insufficiently trained or educated to be successful.⁵² In the JLETES results, over half of the joint logisticians surveyed were unaware these joint courses were available or unable to attend do to operational commitments.⁵³ While these courses are available, their content is currently under review to ensure the information presented corresponds to the improved capability of the joint logistician. The Joint Logistics Course is a resident course provided by the Army Logistics University. The Marine Corps students are supposed to be field

grade officers, senior SNCOs, or civilians (GS12-14) assigned or enroute to a joint billet, with only four quotas per class (ten classes a year).⁵⁴

Fixing the Doctrine Gap

Joint logistics is not directed by a single headquarters, but rather by the procedures and regulations of the individual services. Joint logistics reads well on paper, but in practice, “this loosely formed system relies on informal, personal relationship, command intervention and ad hoc requests resulting in inefficiencies, uncertain schedules, and continual retraining and reestablishment of relationships.”⁵⁵ The joint logistics arena lacks the rules and procedures necessary to provide effective logistics support for operations. Joint Logistics White Paper (JLWP) from 4 June 2010, outlines the concept for future logistics support, but details three issues that must be resolved: insufficiently integrated logistics processes; execution issues; and insufficiently interoperable/integrated C2, logistics management, and financial systems.⁵⁶ The JLWP proposes a solution to current joint logistics issues that centers on a holistic enterprise approach and supporting automated system. Since service logistics doctrine should be nested within the joint logistics framework, the vision of the JLWP could have significant effects on Marine Corps doctrine, training, and education.

Current doctrine provides the basic framework for joint logistics, but where is the how-to manual? The doctrine describes interservice support and lead service logistics, but where does a Marine find out the process to request support, pay for goods and services, and requisition parts? At some point a Marine logistician must interact with the army and exchange information. TTPs are necessary to let that Marine logistician know what information is required, what format to use, who the information goes to, how to track it, and how to pay for it since the service’s multiple logistics systems are not interoperable yet. The Marine Corps Center for Lessons

learned (MCCLLs), and the other service and joint equivalents have dutifully collected and cataloged countless logistics lessons learned from years of operating in Iraq and Afghanistan. These lessons learned should be validated and codified in MCIPs now for later inclusion in MCRP and possibly even MCWPs as applicable. Appropriate doctrine and supporting publications are necessary to formulate more substantive training and education in joint logistics.

Services cannot develop training and education without reference manuals to describe the processes or outline the concepts to be taught. A joint logistics working group should conduct a review to ensure individual service logistics doctrines are nested within the over-arching joint doctrine and no gaps exist between joint logistics doctrine and service logistics doctrine. Joint reference publications should then be developed that further specify the processes outlined in the JP 4-0. The joint reference publications should be supported by service reference manuals and TTPs produced by integrated service working groups. For example, the Army and the Marine Corps would collude on the TTPs for integrated joint ground logistics. Integrated working groups would develop a playbook similar to NLI that details the specifics on connecting to the Army at the tactical and operational levels. An organization currently exists that is capable of forming the necessary working groups and developing joint ground logistics TTPs. The Air Land and Sea Application (ALSA) Center develops multi-service TTPs.⁵⁷ The center has representatives from all services and the authority to develop multi-service doctrine.

The Joint Logistics Training and Education Gap

JP 4-0 acknowledges that, “one of the most critical considerations for the development, enhancement and control of joint logistics is the process that trains, educates and develops joint and Service logisticians... However, each is expected to be an expert in their Service or agency’s logistic profession, enabling the JFC to integrate diverse logistical support capabilities for the

joint force.”⁵⁸ Trained and educated logisticians must be supported by standard processes and systems that support visibility and control of joint logistics assets throughout the battlespace. The TECOM logistics training and education gap analysis showed deficiencies in both the content and the availability of training and education for Marine Corps logisticians. No Marine Corps TECOM entity currently covers the training and education continuum gaps of MAGTF readiness and sustainment at the operational and theater levels.⁵⁹ One of the many categories found wanting by the analysis concerned instruction in joint, coalition, and interagency integration.⁶⁰ The Joint Logistics Course covers joint logistics integration concepts and planning requirements. This course focuses on mainly senior logisticians and only a few Marines attend. While Marine Logisticians are capable operating within the MAGTF, they lack the skills necessary to integrate efficiently with other services and agencies particularly at the operational and theater logistics levels. The 2003 Government Accountability Office (GAO) report on logistics in OIF echoes the above concerns, finding insufficient and ineffective theater distribution capability due to insufficient training.⁶¹ The problem is the lack of standard joint logistics TTPs to facilitate integration compound by multiple non-interoperable logistics systems. The Marine Corps logistician interfaces with his Army counter-part almost daily in OEF using adhoc procedures that have been refined by seven years supporting units in a joint environment. In order to function effectively in the joint arena the MAGTF logistician needs to understand army logistics and the process to leverage it as well as other joint logistics processes.

The Marine Corps trains logisticians to understand the basics of Marine logistics capabilities and processes then sends them out into a joint logistics environment. Marine Corps logisticians receive not only inadequate training and education, but receive it too late in their career. The current logistics T&R manual does not adequately describe the tasks required on

Marine Corps logisticians in a joint environment. Joint logistics is no longer reserved for theater level activities, conducted by high ranking and experienced officers. “Joint logistics planners should recognize the synergies involved in Army and Marine Corps operations and should work to streamline combat service support.”⁶² Joint logistics starts at the tactical level, because Army and Marine Corps units are most often side-by-side in a joint fight that requires interservice logistics support at the tactical level in order to operate effectively in a distributed environment. There are educational courses on joint logistics, but not enough logisticians receiving the knowledge. Training in joint logistics is non-existent, because training requires established TTPs to learn.

Improving Training and Education in Joint Logistics

Professional development requires training, education, and experience. The goal for the Marine Corps Logistics Training and Education continuum should be to develop not only a competent Marine logistician, but also a joint logistician. The joint logistics community needs to tailor joint training and education for initial, advanced, and life-long learning within the logistics training and education continuum. The Joint Logistics Education, Training, and Experimentation Transformation (JLETT) Working Group was formed in order to determine actions or requirements necessary to improve Joint (Interagency and Multinational) logistics education and training. The JLETT-WG recommendations include developing a Joint Logistics Advanced Knowledge Management System, better advertisement of currently available courses, coding billets to show necessary training and education courses.⁶³ These recommendations are good, but the Marine Corps should revise the current logistics training and education continuum to leverage existing joint education opportunities as well as create new opportunities.

MLTEC should review the skill requirements for Marine Corps logisticians in order for the right person (billet/rank) to receive the right training/education at the right time. The career path of a Marine Corps logistician is not well defined nor are there standards for knowledge and skills by billet or grade (after initial MOS training). This places even more importance on a training and education continuum to compensate for lack of experience due to divergent career paths. Marine logisticians need follow-on training after initial MOS training. Advanced courses such as IMLOC and AMLOC may fill this gap, but Joint Mobile Training Teams (JMTTs) could provide additional training prior to deployments similar to the NLI example. MLTEC should leverage the robust ALU online capability to cover the existing gap in Marine Corps training concerning Army logistics processes. The Joint Knowledge Online (JKO) capability should be enhanced to provide training in joint logistics TTPs. The Marine Corps should incorporate the current joint logistics training (resident and distance learning) in to the MOS roadmap for logisticians. MOS roadmaps provide an example of average billet progression with the corresponding training and education opportunities.

Logistics Training and Education Roadmaps

Each group of MOSs has a roadmap that recommends billets, PME, and training by grade. Currently, TECOM only requires roadmaps for enlisted MOSs and not for Logistics or Supply Officers. The current MOS roadmaps for enlisted logisticians are inadequate. Current enlisted logistics MOS roadmaps provide only guidance (no required courses other than PME) and do not include the full range of logistics education available outside of the Marine Corps. There is a difference between the expectation of Marine Corps Logistics Officers, what they have been taught in school, and what they have experienced in their careers. Officers from other MOSs with standard career tracks and advanced training after initial MOS school assume a level

of knowledge and experience similar to their own, but this assumption does not work with logistics officers. Unlike MOSs with a standard career track, a logistician's experience can be anywhere from motor transportation to embarkation or neither. A logistician's performance is dependent on three factors, the person, their experience, and their training. Personalities and experiences vary widely, but knowledge is something that training and education can address. Logistics roadmaps should outline how to develop a professional logistician from entry level training in the MOS throughout the remainder of their career. There is an expectation of competence that comes with each promotion. Roadmaps need to include additional applicable training opportunities both resident and distance learning at all ranks. Additionally, joint logistics criteria must be included in the roadmaps in order to highlight the training and education opportunities and expectations at each rank.

The Marine Corps Logistics Training and Education Center must drive the logistics training and education continuum in order to develop the right training and education for the right people, at the right time. LtCol Kevin M. Barth, former LOGTECOE, wrote in 2007, "The MCCSSS Logistics Training and Education Center of Excellence (LOGTECOE) will work towards providing each Marine with a more holistic T&E continuum, taking into account developments across the DOTMLPF spectrum that will ultimately produce timely, responsive, and current instruction."⁶⁴ The necessary resources and authority were not provided to the Logistics Training and Education Center of Excellence (LOGTECOE) in order to accomplish its mandate. MLTEC has inherited the LOGTECOE responsibilities. Herculean efforts are required to resolve Marine logistics training deficiencies and prepare Marine logisticians for the integrated, interoperable, interservice logistics environment. Only time will tell if MLTEC can produce the holistic logistics training and education continuum Marine Corps logisticians need.

Conclusion

In a recent article, LtCol James C. Bates, currently working at U.S. Joint Forces Command, expressed the need for Army Logisticians to understand the logistics methods and structures of the other services. In an *Army Logistician* article, LtCol James Bates wrote, “the Department of Defense and the armed services must transform into an ever more efficient military force through the use of advanced joint doctrine and warfare, those logisticians who understand the implications and potential for interservice logistics planning and operations will be in a better position to have a positive influence on future combat service support. Soldiers must know all about their comrades in arms in the Marine Corps.”⁶⁵ This advice applies to Marine Corps logisticians as well. The future consists of joint task forces that require joint focus and joint logistics support. In order to achieve the appropriate joint focus, “as with any organization legitimately grounded in doctrine, will come a need for jointly focused and jointly trained logisticians who have hopefully been developed with a joint logistics perspective.”⁶⁶ Doctrine supports the integrated, joint, interdependent concept for logistics support, but now TTPs need to be codified into a workable reference and then into training. There are numerous logistics training and educational opportunities available, but without an institutionalized focus on developing capable joint logistics personnel, the right training and education is not provided to the right people at the right time. Not only is there a gap between the skills required of a Marine Logistician and available joint training and education, but the gap is exacerbated by a lack of focus and prioritization by the institution. Currently, “the Marine Corps has placed the preponderance of the responsibility on the operating forces and individual Marines rather than institutionally driving the T&E continuum.”⁶⁷ MLTEC is with rectifying the current gaps in the

Marine Corps logistics joint training and education continuum, but only time will tell if it can create a joint logistics capable Marine logistician.

The current gap in a Marine Corps logistician's ability to function effectively in a joint logistics environment is the result of insufficient manuals, training, and education. Reference manuals (joint and service) should be created that codify the current integrated logistics processes. Training should be developed to provide the joint logistics knowledge and skills necessary at all levels. Logistics education must include more joint concepts. Joint logistics procedures should be codified in doctrine and supporting publications. The combination of doctrine, reference manuals, and TTPs should provide the framework to develop the training and education necessary to create effective joint logisticians. Existing Marine Corps courses should inculcate joint logistics training and education as well as developing new courses to a broader audience. Most importantly, the institution should place an emphasis on the professional development of not just a Marine logistician, but a joint logistician.

¹ Kris O'Brien, "Joint Logistics." Powerpoint brief, Advanced Logistics Officer Course 2-09, Quantico, VA, April 7, 2009. <https://acc.dau.mil/CommunityBrowser.aspx?id=276878&lang=en-US> (accessed January 20, 2011)

² Mark D. Pike, "BCT Logistics in Al Anbar Province." *Army Logistician* 40, no. 3 (May-June 2008), 8. http://www.almc.army.mil/alog/issues/mayjun08/bct_al_anbar.html (accessed January 24, 2011).

³ Walt Blackwood, "NFTF: Forward Logistics Element Support for Marine Combat Operations in Iraq." *Center for Army Lessons Learned Newsletter* 2, no. 10-55 (August 2010). <http://usacac.army.mil/cac2/call/docs/10-55/10-55.pdf> (accessed January 22, 2011).

⁴ Blackwood, 1.

⁵ Blackwood, 1.

⁶ Robert P. Mann, "Improving Intratheater Joint Distribution." *Army Logistician* 36, no. 3 May-June, 2004): 3-5. <http://www.almc.army.mil/alog/Back.html> (accessed January 24, 2011).

⁷ Lisa A. Zanglin, "Thinking Joint-Integrating Army Logistics." *Army Logistician* 36, no. 4 (July-Aug, 2004):44-45. http://www.almc.army.mil/alog/issues/julAug04/C_thinking.html. (accessed January 24, 2011).

⁸ Commandant of the Marine Corps, *Marine Corps Doctrinal Publications System*. MCO5600.20P, November 8, 2006, enclosure (1) page 2. <http://www.marines.mil/news/publications/Pages/MCO%205600.20P> (accessed February 14, 2011).

⁹ Commandant of the Marine Corps, *Marine Corps Doctrinal Publications Status, 2nd Quarter, Calendar Year 2009*. MCBUL 5600, September 27, 2009, pg 2. <http://www.marines.mil/news/publications/Pages/MCO5600.aspx> (accessed February 14, 2011).

-
- ¹⁰ Commandant of the Marine Corps, *Marine Corps Doctrinal Publications Status, 2nd Quarter, Calendar Year 2009*, 2.
- ¹¹ Headquarters U.S. Marine Corps. *Logistics*. MCDP 4. Washington, D.C: Headquarters Marine Corps, 21 Feb 1997, Foreword.
- ¹² Headquarters U.S. Marine Corps. *Marine Corps Operations*. MCDP 1-0. Washington, D.C: Headquarters Marine Corps, 27 Sept 2001, 5-1.
- ¹³ Headquarters U.S. Marine Corps. *Logistics Operations*. MCWP 4-1. Washington, D.C: Headquarters Marine Corps, April 15, 1999, 1-1.
- ¹⁴ Headquarters U.S. Marine Corps. *Tactical –Level Logistics*. MCWP 4-11. Washington, D.C: Headquarters Marine Corps, June 13, 2000, 2-25.
- ¹⁵ Headquarters U.S. Marine Corps. *Tactical –Level Logistics*, 2-25.
- ¹⁶ Headquarters U.S. Marine Corps. *Tactical –Level Logistics*, 2-25.
- ¹⁷ Headquarters U.S. Marine Corps. *Operational –Level Logistics*. MCWP 4-12. Washington, D.C: Headquarters Marine Corps, January 30, 2002, Foreword.
- ¹⁸ Headquarters U.S. Marine Corps. *Army and Marine Corps Integration in Joint Operations*. MCRP 3-3.8. Washington, D.C: Headquarters Marine Corps, 1996, IX-1.
- ¹⁹ Commandant of the Marine Corps. *Realignment and Renaming of the FSSG*. MARADMIN 355/05, July 22, 2005. <http://www.marines.mil/news/messages/Pages/MARADMIN355-05> (accessed December 9, 2010).
- ²⁰ Headquarters U.S. Army, *Operations*, FM 3-0. Washington, D.C.: Headquarters Army, June 2001, 1-10. <http://www.army.mil/fm3-0/FM3-0.pdf> (accessed December 9, 2010).
- ²¹ U.S. Department of Defense, *Joint Operations*, JP 3-0. Washington, D.C.: U.S. Department of Defense, 17 September 2006.
- ²² Higgins, Paul J. "Civilian Augmentation of Joint Operations." *Army Logistician* 35, no. 1 (January-February, 2003): 14-15. <http://www.almc.army.mil/alog/issues/JanFeb03/MS870.htm> (accessed January 24, 2011).
- ²³ "U.S. Army Logistics Transformation," USMC Logistics Conference, 24 Sep 2008.
- ²⁴ U.S. Department of Defense. "Logistics Road Map." Washington, D.C.: U.S. Department of Defense. http://www.acq.osd.mil/log/sci/roadmap/DoD-Logistics-Roadmap-WebVol_II.pdf (accessed January 15, 2011).
- ²⁵ David A. Anderson and Dale L. Farrand, "An Army Revolution in Military Logistics?" *Army Logistician* 39, no. 4 (July-August 2007), pg. 1. http://www.almc.army.mil/alog/issues/julaug07/log_revolution.html (accessed January 26, 2011).
- ²⁶ U.S. Department of Defense, *Joint Logistics*, JP 4-0. Washington, D.C.: U.S. Department of Defense, July 18, 2008, vii. http://www.dtic.mil/doctrine/new_pubs/jointpub_logistics.htm (accessed January 12, 2011).
- ²⁷ U.S. Department of Defense, *Joint Logistics*, 1-2.
- ²⁸ U.S. Department of Defense, *Joint Logistics*, 1-2.
- ²⁹ USA Logistics Transformation, USMC Logistics Conference, 24 Sep 2008.
- ³⁰ U.S. Department of Defense, *Joint Logistics*, 1-2.
- ³¹ U.S. Department of Defense, *Joint Logistics*, 1-2.
- ³² Robert H. Essenhigh, "A Few Thoughts on the Difference between Training and Education." *National Forum: The Phi Kappa Phi Journal*, Spring 2000, pg 46. <http://www.uamont.edu/facultyweb/gulledge/Articles/Education%20versus%20Training%20.pdf> (accessed February 14, 2011).
- ³³ Jason Eby, "Making Better Logisticians: Enhancing the Logistics Training and Education Center of Excellence." Masters Thesis, Marine Corps University, 2009, pg 10. <http://stinet.dtic.mil/>.
- ³⁴ Melvin Speise and LtCol William Wroten Jr, *Logistics Training and Education Gaps: TECOM Analysis Brief*. November 2008.
- ³⁵ Omar J. Randall, "Training for Success: The Need For A Logistics Combat Element Training and Education Center of Excellence." Masters Thesis, Marine Corps University, 2009, pg 3. <http://stinet.dtic.mil/>.
- ³⁶ United States Marine Corps Training and Education Command, *Initiating Directive to Establish the MAGTF Logistics Training and Education Center (MLTEC)*. August 5, 2010, 1.
- ³⁷ MCCSSS Mission Statement, <http://www.lejeune.usmc.mil/mccsss/mission.shtml>
- ³⁸ Randall, 13.

- ³⁹ United States Marine Corps Training and Education Command, *FRAGO 2 to Initiating Directive to Establish the MAGTF Logistics Training and Education Center (MLTEC)*. October 1, 2010, pg 2.
- ⁴⁰ Richard W. Owen, "IMLOC Joint Logistics Content," email to Maj Karin R. Fitzgerald, 14 February 2011.
- ⁴¹ Kirk M. Spangenberg, "Putting the 'L' Back in MAGTF: Enabling the Success of the MAGTF Logistician for Today's Fight and Future Conflict." Masters Thesis, Marine Corps University, 2009, 6. <http://stinet.dtic.mil/>.
- ⁴² Marine Corps Combat Service Support Schools: *Update to Planning for MAGTF Logistics Training and Education Center (MLTEC)*. Camp Johnson, NC: AMHS, DTG 231700Z Aug 10. <https://138.156.57.17/amhs/messagepane>. (accessed February 14, 2011).
- ⁴³ Spangenberg, 6.
- ⁴⁴ Deputy Commandant, Installations and Logistics, Deputy Chief of Naval Operations for Fleet Readiness and Logistics, and Chief of Staff, U.S. Coast Guard. *Naval Logistics Integration 2011-2015 Strategic Plan*. Pg 2. [http://www.usmc.mil/unit/logistics/Documents/20101130%20NLI%20Strategic%20Plan%20\(signed\).pdf](http://www.usmc.mil/unit/logistics/Documents/20101130%20NLI%20Strategic%20Plan%20(signed).pdf) (accessed January 20, 2011).
- ⁴⁵ Deputy Commandant, Installations and Logistics, Deputy Chief of Naval Operations for Fleet Readiness and Logistics, and Chief of Staff, U.S. Coast Guard. *Naval Logistics Integration 2011-2015 Strategic Plan*, 7.
- ⁴⁶ Army Logistics University, Mission Statement, http://www.almc.army.mil/ALU_ABOUT/ALUMISSIONVISION.htm
- ⁴⁷ ALU Facts, http://www.almc.army.mil/ALU_ABOUT/ALUFACTS.htm
- ⁴⁸ Major Chris Palfi, USA, *Combined Logistics Captains Career Course Brief*, date unknown.
- ⁴⁹ Spangenberg, 6.
- ⁵⁰ Kathleen M. Gainey, "Joint Logistics Annual Guidance 2010", pg. 5. <https://acc.dau.mil/ad/en-US/410034/file/54591/J4%20Joint%20Logistics%20Strategic%20Guidance%202010.pdf> (accessed January 14, 2011).
- ⁵¹ Kris O'Brien, "Joint Logistics Education Update." Powerpoint brief, June 10, 2009. <https://acc.dau.mil/CommunityBrowser.aspx?id=290512&lang=en-US> (accessed January 20, 2011).
- ⁵² U.S. Joint Forces Command, "Combatant Commander Joint Logistics Education, Training, and Exercise Results." Brief presented at the Worldwide Joint Scheduling and Training Conference, 26 Aug 2009. <https://acc.dau.mil/CommunityBrowser.aspx?id=408933&lang=en-US> (accessed January 14, 2011).
- ⁵³ U.S. Joint Forces Command, "Combatant Commander Joint Logistics Education, Training, and Exercise Results."
- ⁵⁴ Commandant of the Marine Corps, *FY11 Marine Corps Logistics Education Opportunities*. MARADMIN 438/10, August 6, 2010. <http://www.marines.mil/news/messages/Pages/MARADMIN438-10> (accessed February 9, 2011).
- ⁵⁵ USA Logistics Transformation, USMC Logistics Conference, 24 Sep 2008.
- ⁵⁶ Dale Houck, "Achieving Army-Marine Corps Logistics Interoperability." *Defense AT&L*, November 1, 2009. <https://lia.army.mil/initiatives.html#AMLID> (accessed January 24, 2011).
- ⁵⁷ "Air Land Sea Application Center," Roadshow brief, <http://www.alsa.mil> (accessed March 9, 2011).
- ⁵⁸ U.S. Department of Defense, *Joint Logistics*, 1-3.
- ⁵⁹ Randall, Appendix A.
- ⁶⁰ Spangenberg, 9.
- ⁶¹ U.S. Government Accountability Office, *Defense Logistics: Preliminary Observations on the Effectiveness of Logistics Activities During Operation Iraqi Freedom*. Washington, D.C: Government Accountability Office, 2003. <http://gao.gov/products/GAO-04-305R>. (accessed February 26, 2011).
- ⁶² James C. Bates, "What Army Logisticians Should Know About the Marine Corps". *Army Logistician* 35, no. 4 (July-August, 2003): 11-13. http://www.almc.army.mil/alog/issues/julaug03/know_about_marinecorps.html (accessed January 24, 2011).
- ⁶³ Warren Bizub, "Joint Logistics Education, Training, and Experimentation Transformation (JLETT) Working Group." Powerpoint Brief, Worldwide Joint Training Scheduling Conference 10-2, 20 September 2010. <https://acc.dau.mil/CommunityBrowser.aspx?id=410352&lang=en-US> (accessed January 24, 2011).

⁶⁴ Kevin M. Barth, "Logistics Training and Education Center of Excellence." *Marine Corps Gazette* 91, no. 6 (June 2007), 57.

⁶⁵ Bates.

⁶⁶ Arnold Pleasant and Maurice S. Pickett. "Joint Logisitics Management Command: Which Service is Better." Research Report, Air University, 1999. pg. 27. <http://stinet.dtic.mil/>.

⁶⁷ Spangenberg, 15.

Bibliography

- Anderson, David A. and Dale L. Farrand. "An Army Revolution in Military Logistics?" *Army Logistician* 39, no. 4 (July-August 2007). http://www.almc.army.mil/alog/issues/julaug07/log_revolution.html (accessed January 26, 2011).
- "Air Land and Sea Application Center." Roadshow Brief, <http://www.alsa.mil/> (accessed March 9, 2011).
- Army Logistics University, <http://www.almc.army.mil>.
- Barth, Kevin M. "Logistics Training and Education Center of Excellence." *Marine Corps Gazette* 91, no. 6 (June 2007): 54-57.
- Bates, James C. "What Army Logisticians Should Know About the Marine Corps". *Army Logistician* 35, no. 4 (July-August, 2003): 11-13. http://www.almc.army.mil/alog/issues/julaug03/know_about_marinecorps.html (accessed January 24, 2011).
- Bizub, Warren. "Joint Logistics Education, Training, and Experimentation Transformation (JLETT) Working Group." Powerpoint Brief, Worldwide Joint Training Scheduling Conference 10-2, 20 September 2010. <https://acc.dau.mil/CommunityBrowser.aspx?id=410352&lang=en-US> (accessed January 24, 2011).
- Blackwood, Walt. "NFTF: Forward Logistics Element Support for Marine Combat Operations in Iraq." *Center for Army Lessons Learned Newsletter* 2, no. 10-55 (August 2010). <http://usacac.army.mil/cac2/call/docs/10-55/10-55.pdf> (accessed January 22, 2011).
- "Combatant Commander Joint Logistics Education, Training, and Exercise Survey Results." Worldwide Joint Scheduling and Training Conference, August 26, 2009. <https://acc.dau.mil/CommunityBrowser.aspx?id=408933&lang=en-US> (accessed January 20, 2011).
- Commandant of the Marine Corps. 35th *Commandant of the Marine Corps Commandant's Planning Guidance 2010*. <http://www.marines.mil/unit/hqmc/Pages/2010Commandant'sPlanningGuidance.aspx> (accessed January 12, 2011).
- Commandant of the Marine Corps. *FY11 Marine Corps Logistics Education Opportunities*. MARADMIN 438/10, August 6, 2010. <http://www.marines.mil/news/messages/Pages/MARADMIN438-10> (accessed February 9, 2011).
- Commandant of the Marine Corps. *Marine Corps Doctrinal Publications System*. MCO5600.20P, November 8, 2006. <http://www.marines.mil/news/publications/Pages/MCO%205600.20P> (accessed February 14, 2011).
- Commandant of the Marine Corps. *Marine Corps Doctrinal Publications Status, 2nd Quarter*,

Calendar Year 2009. MCBUL 5600, September 27, 2009.

<http://www.marines.mil/news/publications/Pages/MCO5600.aspx> (accessed February 14, 2011).

Commandant of the Marine Corps. *Logistics Training and Readiness Manual*. NAVMC 3500.27A. 26 June, 2008. <http://www.marines.mil/news/publications/Pages/Publications31> (accessed February 14, 2011).

Commandant of the Marine Corps. *Realignment and Renaming of the FSSG*. MARADMIN 355/05, July 22, 2005. <http://www.marines.mil/news/messages/Pages/MARADMIN355-05> (accessed December 9, 2010).

Commandant of the Marine Corps. *Tactical Logistics Operations Course (TLOC) and Advanced Logistics Operations Course (ALOC) Cancellations*. MARADMIN 075/11, February 1, 2011. <http://www.marines.mil/news/messages/Pages/MARADMIN075-11> (accessed February 9, 2011).

Defense Acquisition University, <https://acc.dau.mil/communitybrowser.aspx>.

Deputy Commandant, Installations and Logistics, Deputy Chief of Naval Operations for Fleet Readiness and Logistics, and Chief of Staff, U.S. Coast Guard. *Naval Logistics Integration 2011-2015 Strategic Plan*. [http://www.usmc.mil/unit/logistics/Documents/20101130%20NLI%20Strategic%20Plan%20\(signed\).pdf](http://www.usmc.mil/unit/logistics/Documents/20101130%20NLI%20Strategic%20Plan%20(signed).pdf) (accessed January 20, 2011).

Eby, Jason. "Making Better Logisticians: Enhancing the Logistics Training and Education Center of Excellence." Masters Thesis, Marine Corps University, 2009. <http://stinet.dtic.mil/>.

Essenhugh, Robert H. "A Few Thoughts on the Difference between Training and Education." *National Forum: The Phi Kappa Phi Journal*, Spring 2000, pg 46. <http://www.uamont.edu/facultyweb/gulledge/Articles/Education%20versus%20Training%20.pdf> (accessed February 14, 2011).

Gainey, Kathleen M. "Joint Logistics Annual Guidance 2010." <https://acc.dau.mil/adl/en-US/410034/file/54591/J4%20Joint%20Logistics%20Strategic%20Guidance%202010.pdf> (accessed January 14, 2011).

Granata, Joseph P. "Tracking Materiel From Warehouse to Warfighter." *Army Logistician* 37, no. 5 (September-October). http://www.almc.army.mil/alog/issues/julaug05/track_materiel.html (accessed January 26, 2011).

Headquarters U.S. Army, *Operations*, FM 3-0. Washington, D.C.: Headquarters Army, June 2001. <http://www.army.mil/fm3-0/FM3-0.pdf> (accessed December 9, 2010).

Headquarters U.S. Marine Corps. *Army and Marine Corps Integration in Joint Operations*. MCWP 3-36. Washington, D.C.: Headquarters Marine Corps, November 2001.

- Headquarters U.S. Marine Corps. *Logistics*. MCDP 4. Washington, D.C: Headquarters Marine Corps, February 21, 1997.
- Headquarters U.S. Marine Corps. *Logistics Operations*. MCWP 4-1. Washington, D.C: Headquarters Marine Corps, April 15, 1999.
- Headquarters U.S. Marine Corps. *Marine Corps Operations*. MCDP 1-0. Washington, D.C: Headquarters Marine Corps, September 27, 2001.
- Headquarters U.S. Marine Corps. *Marine Corps Logistics Education Opportunities*. MARADMIN 438/10 FY11 Washington, D.C: Headquarters Marine Corps
- Headquarters U.S. Marine Corps. *Operational –Level Logistics*. MCWP 4-12. Washington, D.C: Headquarters Marine Corps, January 30, 2002.
- Headquarters U.S. Marine Corps. *Tactical –Level Logistics*. MCWP 4-11. Washington, D.C: Headquarters Marine Corps, June 13, 2000.
- Higgins, Paul J. “Civilian Augmentation of Joint Operations.” *Army Logistician* 35, no. 1 (January-February, 2003): 14-15. <http://www.almc.army.mil/alog/issues/JanFeb03/MS870.htm> (accessed January 24, 2011).
- Houck, Dale. “Achieving Army-Marine Corps Logistics Interoperability.” *Defense AT&L*, November 1, 2009. <https://lia.army.mil/initiatives.html#AMLID> (accessed January 24, 2011).
- Mann, Robert P. “Improving Intratheater Joint Distribution.” *Army Logistician* 36, no. 3 (May-June, 2004): 3-5. <http://www.almc.army.mil/alog/Back.html> (accessed January 24, 2011).
- Mann, Robert P. “Where are We Going? The Future of Joint Logistics.” *Army Logistician* 42, no. 6 (November-December, 2010). http://www.almc.army.mil/alog/spectrum_future_jointlog.html (accessed January 24, 2011).
- Marine Corps Combat Service Support Schools. *Update to Planning for MAGTF Logistics Training and Education Center (MLTEC)*. Camp Johnson, NC: AMHS, DTG 231700Z Aug 10. <https://138.156.57.17/amhs/messagepane>. (accessed February 14, 2011).
- Marine Corps Combat Service Support Schools. *Update 2 to Planning for MAGTF Logistics Training and Education Center (MLTEC)*. Camp Johnson, NC: AMHS, DTG 021146Z Nov 10. <https://138.156.57.17/amhs/messagepane>. (accessed February 14, 2011).
- Marquardt, Kent S. “Devising Operational Logistics Doctrine.” *Army Logistician* 32, no. 1 (January-February, 2000):28-33. <http://www.almc.army.mil/alog/issues/janfeb00/ms481.html> (accessed January 24, 2011).

MCCSSS, <http://www.lejeune.usmc.mil/mccsss/mission.shtml>

MLTEC OPT. "MAGTF Logistics Training & Education Center (MLTEC) Stand-Up Mission Analysis". Powerpoint presentation brief, MCCSSS, Camp Johnson, NC, August 16, 2010. <https://www.intranet.tecom.usmc.mil/schools/mccsss/los/mltec%20documentation/forms/allitems.aspx?RootFolder=%2fschools%2fMCCSSS%2fLOS%2fMLTEC%20Documentation%2fMLTEC%20Documents&View=%7b694BADD8%2d40F2%2d443D%2dAA7E%2dD0F04F7A55FF%7d> (accessed February 3, 2011).

O'Brien, Kris. "Joint Logistics." Powerpoint brief, Advanced Logistics Officer Course 2-09, Quantico, VA, April 7, 2009. <https://acc.dau.mil/CommunityBrowser.aspx?id=276878&lang=en-US> (accessed January 20, 2011).

O'Brien, Kris. "Joint Logistics Education Update." Powerpoint brief, June 10, 2009. <https://acc.dau.mil/CommunityBrowser.aspx?id=290512&lang=en-US> (accessed January 20, 2011).

Owen, Richard W. "IMLOC Joint Logistics Content." Email to Maj Karin R. Fitzgerald, 14 February 2011.

Major Chris Palfi, *Combine Logistics Captains Career Course Brief*, date unknown.

Pike, Mark D. "BCT Logistics in Al Anbar Province." *Army Logistician* 40, no. 3 (May-June 2008). http://www.almc.army.mil/alog/issues/mayjun08/bct_al_anbar.html (accessed January 24, 2011).

Pleasant, Arnold and Maurice S. Pickett. "Joint Logistics Management Command: Which Service is Better." Research Report, Air University, 1999. <http://stinet.dtic.mil/>.

Randall, Omar J. "Training for Success: The Need For A Logistics Combat Element Training and Education Center of Excellence." Masters Thesis, Marine Corps University, 2009. <http://stinet.dtic.mil/>.

Spangenberg, Kirk M. "Putting the "L" Back in MAGTF: Enabling the Success of the MAGTF Logistician for Today's Fight and Future Conflict." Masters Thesis, Marine Corps University, 2009. <http://stinet.dtic.mil/>.

Spiese, Melvin (BGen) and LtCol William Wroten Jr, *Logistics Training and Education Gaps: TECOM Analysis Brief*. November 2008.

U.S. Army Logistics Innovation Agency, <https://lia.army.mil>.

"U.S. Army Logistics Transformation." Powerpoint brief, USMC Logistics Conference, September 24, 2008.

U.S. Department of Defense. *Joint Operations*. JP 3-0. Washington, D.C.: U.S. Department of

Defense, 17 September 2006. http://www.dtic.mil/doctrine/new_pubs/jointpub_operations.htm (accessed January 12, 2011).

U.S. Department of Defense. *Joint Logistics*. JP 4-0. Washington, D.C.: U.S. Department of Defense, 18 July 2008. http://www.dtic.mil/doctrine/new_pubs/jointpub_logistics.htm (accessed January 12, 2011).

U.S. Department of Defense. "Logistics Road Map." Washington, D.C.: U.S. Department of Defense. http://www.acq.osd.mil/log/sci/roadmap/DoD-Logistics-Roadmap-WebVol_II.pdf (accessed January 15, 2011).

U.S. Department of Defense. *Joint Tactics, Techniques, and Procedures For Common-User Logistics During Joint Operations*, JP 4-07. Washington, D.C.: U.S. Department of Defense, June 11, 2001. http://www.acq.osd.mil/dpap/ccap/cc/jcchb/Contingency%20Model/FormsPubsRegs/Pubs/jp4_07.pdf (accessed March 8, 2011).

U.S. Government Accountability Office. *Defense Logistics: Additional Oversight and Reporting for the Army Logistics Modernization Program are Needed*. Washington, D.C.: Government Accountability Office, 2010. <http://gao.gov/products/GAO-11-139>. (accessed February 26, 2011).

U.S. Government Accountability Office. *Defense Logistics: Preliminary Observations on the Effectiveness of Logistics Activities During Operation Iraqi Freedom*. Washington, D.C.: Government Accountability Office, 2003. <http://gao.gov/products/GAO-04-305R>. (accessed February 26, 2011).

U.S. Joint Forces Command. "Combatant Commander Joint Logistics Education, Training, and Exercise Results." Brief presented at the Worldwide Joint Scheduling and Training Conference, 26 Aug 2009. <https://acc.dau.mil/CommunityBrowser.aspx?id=408933&lang=en-US> (accessed January 14, 2011).

U.S. Joint Forces Command, Joint Knowledge Online, <https://jko.jfcom.mil>.

U.S. Joint Forces Command. *Joint Logistics White Paper*. Hampton Roads, Va: U.S. Joint Forces Command, March 8, 2010. <https://acc.dau.mil/CommunityBrowser.aspx?id=409261&lang=en-US> (accessed January 24, 2011).

United States Marine Corps Training Command. *CG TRNGCMD Guidance to MCCSSS IRT TECOM FRAGO 1 DTD 1 Oct 2010*. Quantico, VA: AMHS DTG 032016Z Nov 10. <https://138.156.17/amhs/messagepane> (accessed February 14, 2011).

United States Marine Corps Training and Education Command. *Initiating Directive to Establish the MAGTF Logistics Training and Education Center (MLTEC)*. August 5, 2010.

United States Marine Corps Training and Education Command. *FRAGO to Initiating Directive to Establish the MAGTF Logistics Training and Education Center (MLTEC)*. January 3, 2011.

United States Marine Corps Training and Education Command. *FRAGO 2 to Initiating Directive to Establish the MAGTF Logistics Training and Education Center (MLTEC)*. October 1, 2010.

Zanglin, Lisa A. "Thinking Joint-Integrating Army Logistics." *Army Logistician* 36, no. 4 (July-Aug, 2004):44-45. http://www.almc.army.mil/alog/issues/julAug04/C_thinking.html. (accessed January 24, 2011).